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Subject:	Comments on LWG Lamprey Response Letter
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Eric and Burt,

Here are my comments on the LWG memo on assessing lamprey at the individual level:

1. Early on in the process we identified lamprey as a separate assessment endpoint because they are so different from other fish groups in terms of habitat use, food source and potential phylogenic differences in sensitivity. For these reasons, they are not a good representatives of other fish that may be considered "detritivores", and we knew there was not any other fish that fit this category. That is why lamprey were called out separately as an assessment endpoint. It is unclear how they would be good representatives of other detritivores.

2. Reproductive endpoints should be included in the TRV process. If we are protecting detritivorous fish as a group, it is unclear why reproduction was then dropped from problem formulation, since this argument could presumably only be made for lamprey. In addition, consideration of reproductive endpoints may be important surrogates for growth effects where they are not available.

4. I think if they are going to make these arguments they have to make them with actual NOEC data from the bioassays and the onset of other adverse effects seen in the toxicity tests at lower concentrations that are not considered in the LC50 calculation. This should not just included mortality endpoints.

6. We have limited TZ water data, and therefore in order to assess risk to lamprey that would include the range of all potential site exposure we would have to use a tool to predict potential water concentrations. This doesn't seem to be an unjustified task, as it would be predicting exceedences of AWQC over different sediment concentration for which TZ (or "pore water") was not measure empirically. This would require using equilibrium partitioning methodology, which is EPA guidance, to estimate between water and sediment. We are conducting this analysis for the protection of the benthic community, so I am unsure why the same results shouldn't be used as a line of evidence for lamprey in the risk assessment. It seems they may need to do this evaluation as at least an initial step or collect more TZ water data to represent other important areas of the site.

7. We should emphasize that the tissue samples we do have are composite samples over large areas and do not represent individual exposure. I would not say "they provide an integrated value over the study area" because even the data we have is very limited and likely doesn't represent even a good site-wide "average". I think the LWG is making the point that tissue provides an integrative line of evidence because it incorporates sediment and water exposures. However, the composites were made over a much larger area than ammocoete exposure occurs, and therefore body burden cannot be related back to the appropriate spatial scale. The data is therefore inadequate to estimate the range of potential body burdens of individual ammocoetes exposed to different sediment conditions in the harbor.

8. We cannot say that the "data will be assumed to be adequately representative of tissue residues in individual ammocoetes". The sampling design precludes that it can be representative of individuals. Perhaps a BSAF approach should be explored to estimate the range of individual body burdens.

-Jennifer